

Gasoline Cars & Trucks

Workgroup

Recommendations for Further Consideration



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Why the Concern?

New Jersey is out of Attainment

- For Ozone (O_3)

Due to high levels of O_3 precursors:

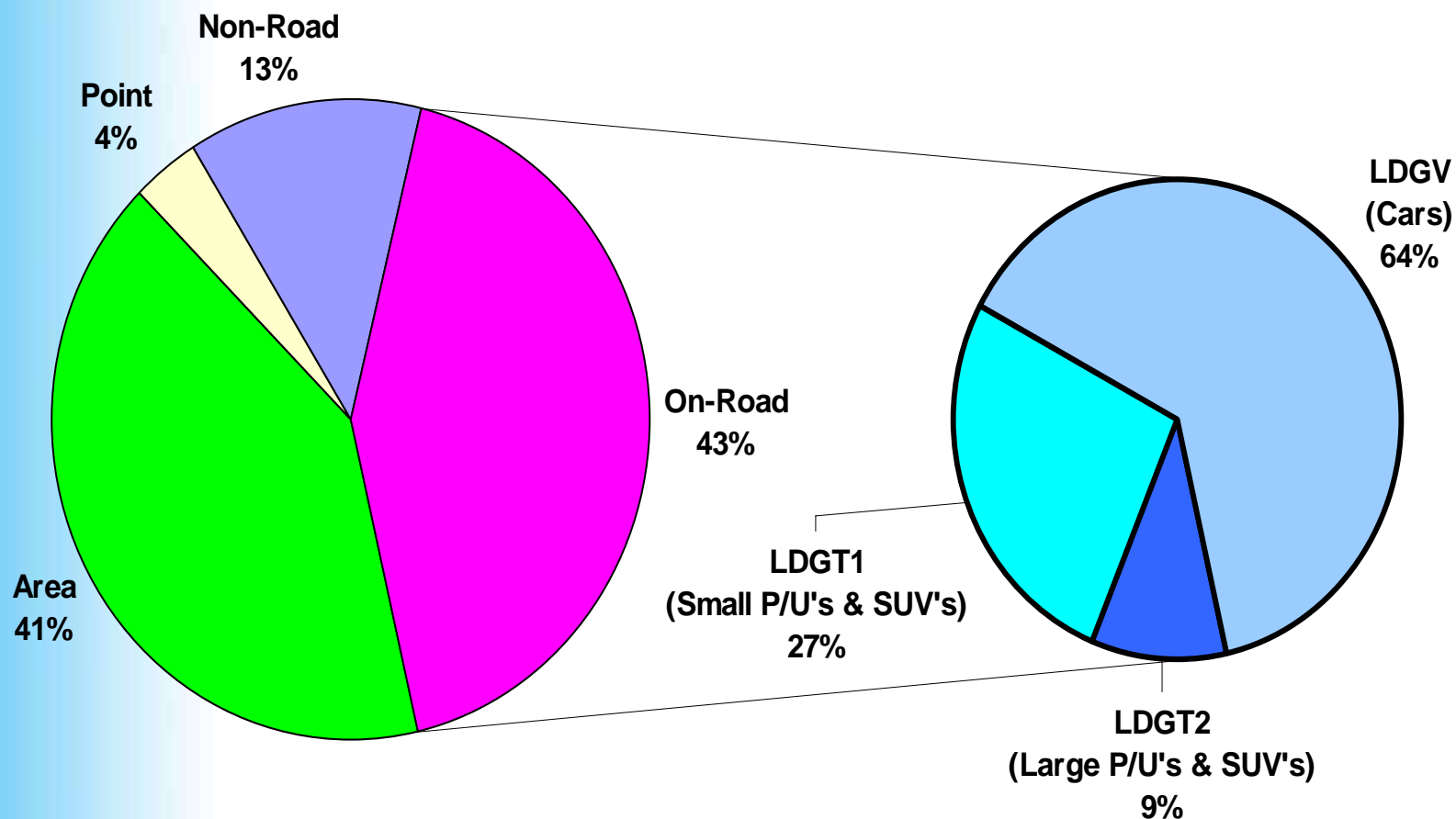
- Volatile Organic Compounds (VOC)
- Oxides of Nitrogen (NO_x)

- For Fine Particulate Matter ($PM_{2.5}$)

Why Worry About Gasoline Powered Vehicles?

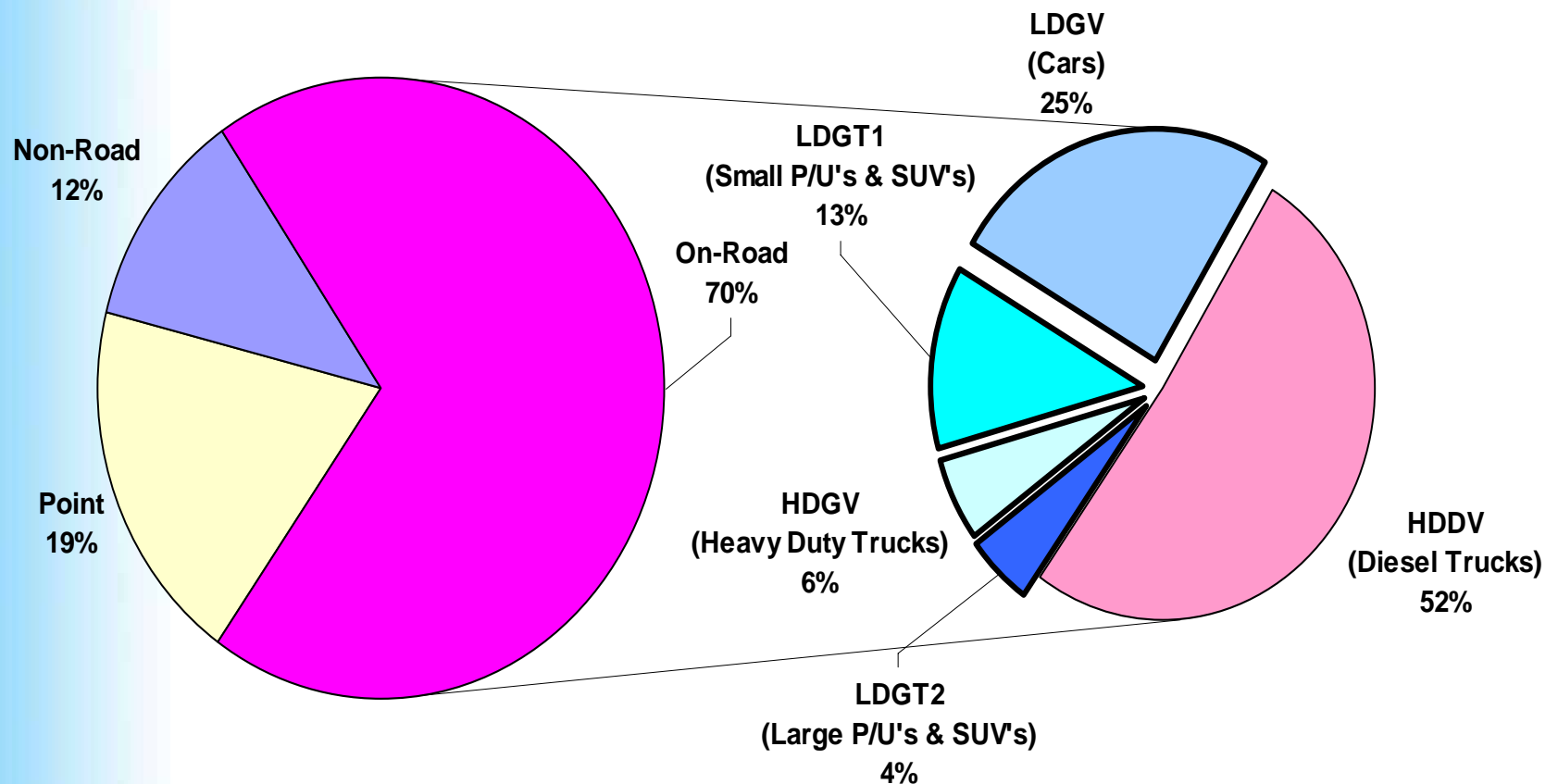
Gasoline powered Cars & Trucks are major producers of the O_3 precursors VOC & NO_x and a significant source of $PM_{2.5}$ as well.

Cars & Trucks Portion of VOC Inventory



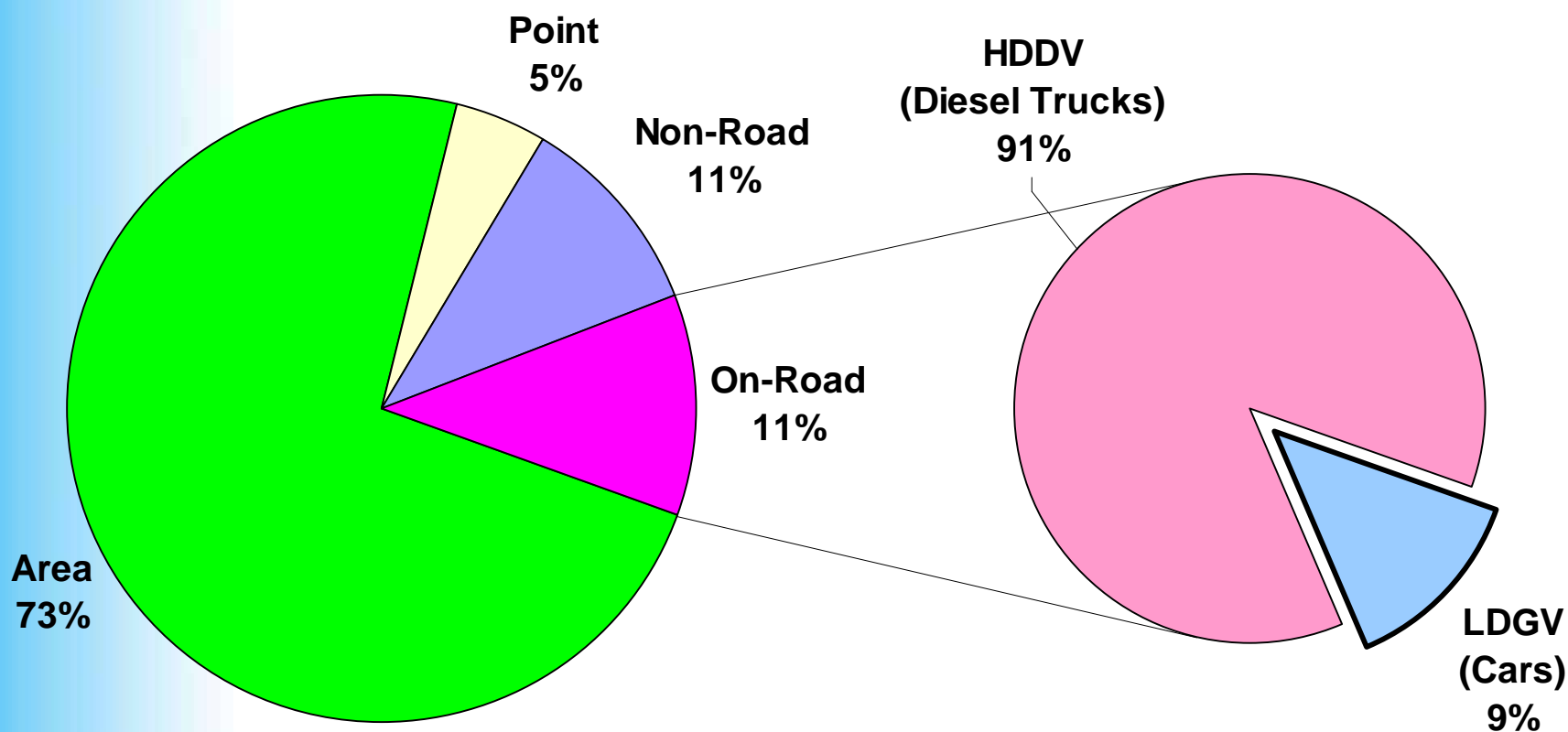
Source: 2002 NJ Emission Inventory Top 15 by SCC

Cars & Trucks Portion of NO_x Inventory



Source: 2002 NJ Emission Inventory Top 15 by SCC

Cars & Trucks Portion of PM_{2.5} Inventory



Source: 2002 NJ Emission Inventory Top 15 by SCC

Types of Control Measures

- Technological
- Behavioral
- Voluntary
- Mandatory/Regulatory

Most Promising

- Anti-idling Education/Enforcement
- Roadside RSD (gross-emitter)
- Repair Assistance for Older Cars (LIRAP)
- Employee Trip Reduction Programs (ETRP)
- Travel Demand Management (TDM)
- State Gas-Guzzler Tax (w/ high efficiency credit)
- Annual I/M for Cars Over 10 Years
- Supply Gas Caps at CIFs for Vehicles Failing Cap Test

Promising

- Convert State & Large Corp. Fleets to Hybrid and/or Alternate Fueled Vehicles
- General Education Programs
- MPG/Emissions Requirements for Large Fleets
- Employer Shuttles to Train/Bus
- Fee Based on Vehicle Miles Traveled (VMT)
- Intercept Park-n-Ride
- Alternate Fuels Tax Credit

Least Promising

- Electric Shuttles in Structured Communities
- Electric Vehicle Charging Stations
- Expand NJ Transit Service (time and route)
- Revise Gasoline Formulation
- Hydrogen Vehicles
- Increase Fuel Tax
- Early Vehicle Retirement Programs
- Pollution Credit Trading Program
- Expansion of Bike/Hiking Trails
- Catalytic Converter Retrofits
- Registration Fee Based on Vehicle Weight
- Ban Drive-Thru Banks, Fast Food

Ton/Year Estimates

<u>Control Measure</u>	<u>Populations Affected</u>	<u>PM_{2.5}</u>	<u>NO_x</u>	<u>VOC</u>
Anti-Idling	All NJ motorists; local police	Proportional to fuel savings	38	20
Roadside RSD	Owners of poorly maintained vehicles	Indeterminate	18	20
LIRAP	Low income owners of older, poorly maintained vehicles	Indeterminate	29	31
ETRP	Employees of large companies	Proportional to fuel & VMT savings	192	165
TDM	All NJ motorists	Proportional to fuel & VMT savings	211	247
Guzzler Tax	NJ motorists considering the purchase of a new vehicle	Proportional to fuel savings	40	8
Annual I/M	Owners of vehicles over 10 years	Indeterminate	624	669
CIF Gas Cap Supply	All NJ motorists who use CIFs	None	None	Unknown
Education	All NJ motorists	Proportional to fuel savings	64	42
Fuel Tax	All motorists who purchase fuel in NJ	Proportional to fuel savings		

No One Solution

While these may seem impressive, MOBILE6 modeling predicts that emissions from this segment will be around 100 tons per DAY of both VOC & NO_x by 2010 when many of these control measures might be put in place.

We will need to use many of these control measures in combination in order to have the needed impact.

White Papers Submitted

- Low Income Repair Assistance Program – Rob Schell, NJDEP
- Pollution Credit Trading Program – Kirk Barrett, Montclair University

State Team Members

- Jeff Cantor - Workgroup Leader and Facilitator, NJDEP
- Rob Schell - NJDEP
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